Ogden Air Logistics Center

Global Steel/Aluminum Market Assessment

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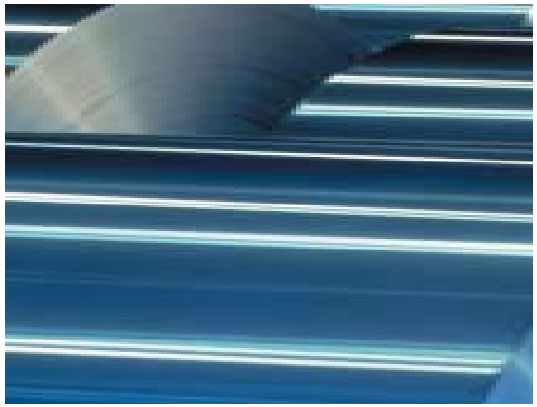
U.S. AIR FORCE

Objectives

- **For consideration during the following slides:**
  - **What are the impacts to landing gear obligations?**
  - **Scheduled deliveries?**
  - **Cost implications?**



Overview

- Metal Industry Trends
- Steel
  - Global Market
  - Market Outlook
- Aluminum
  - Global Market
  - Market Outlook
- Input Costs/Currency
- Sample Metrics
- Supplier Actions

Metal Industry Trends

- Long term trends shaping metal industries
  - New manufacturing technology
  - Raw material costs
  - Consolidation
  - Foreign competition
  - Materials substitution
- Global economic growth rate expected to decrease
  - Rate to decrease est. 1% in 06
- Increased reliance on Metal Service Centers (MSC)
  - Participation in Vendor Managed Inventory (VMI)
- Pentagon has not accepted any sort of “Buy American” Policy
  - Doors open to foreign vendors

Global Steel Market

- Grew by 49% in 2004 to reach a value of $822B
  - U.S. demand expected to rise 3% to 95.5M-T in 2005
- Increased privatization in steel industry
- Mittal Steel is the # 1 steel producer in the world
  - Despite this it only has 6% of global market share
  - Expect current wave of industry mergers to continue
- Fundamental Changes in U.S. Steel Market
  - Shrinking industrial consumption and production
  - Changing domestic mill supply chain
  - Limited foreign steel imports at present but trend is reversing

Global Steel Market Cont…

- Asia now produces approximately 50%
- Chinese demand accounts for 33% of global market
  - Comparison: US demand is 13%
  - China is world's #1 importer of steel
- Chinese steel production 50 year history:
  - 1949 to 1986 – reached 50M metric tons
  - 2003 – 220M metric tons
  - 2004 – 260M metric tons

Market Outlook

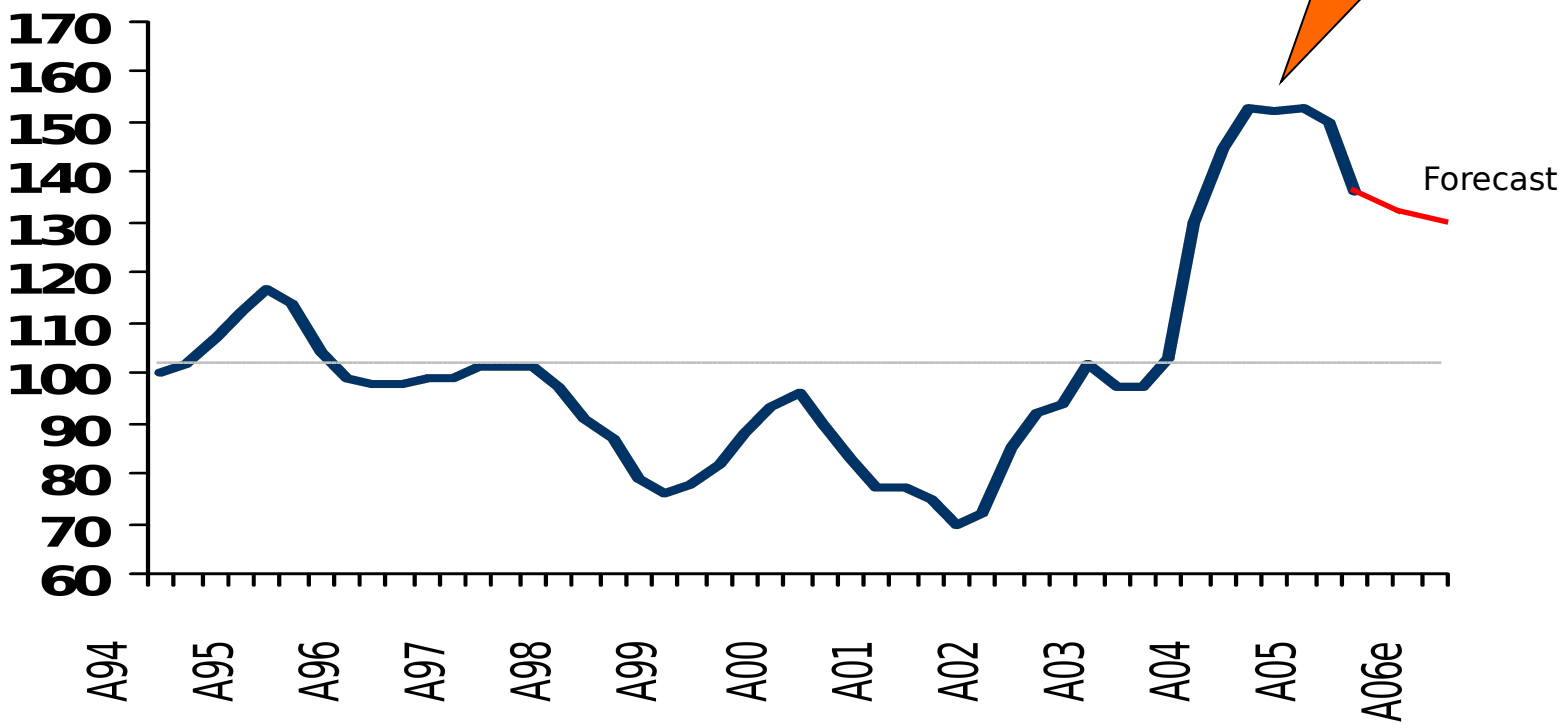
- Steel prices in Apr declined for 6th straight month
  - Mittal & Nucor reduced production due to lower demand
  - Expect prices to decrease in Quarter 2 & 3 of 2005
  - Steel prices are now beyond their peak but still higher than historic prices
  - Spot prices declining for most carbon products
  - Increase in imported steel
  - Lower overseas scrap demand
- Chinese government may reduce demand by cooling growth

Market Outlook Cont…

- Global steel market forecasted to increase by only 3.7% in 2005
  - Projected volume of 2.2K million metric tons by 2009
- Factors for declining global steel prices
  - Increase in Chinese steel production
  - Overbuilt inventories at customers and MSC
  - Increasing imports of steel mill
  - Lower near term steel demand

Steel Price Index

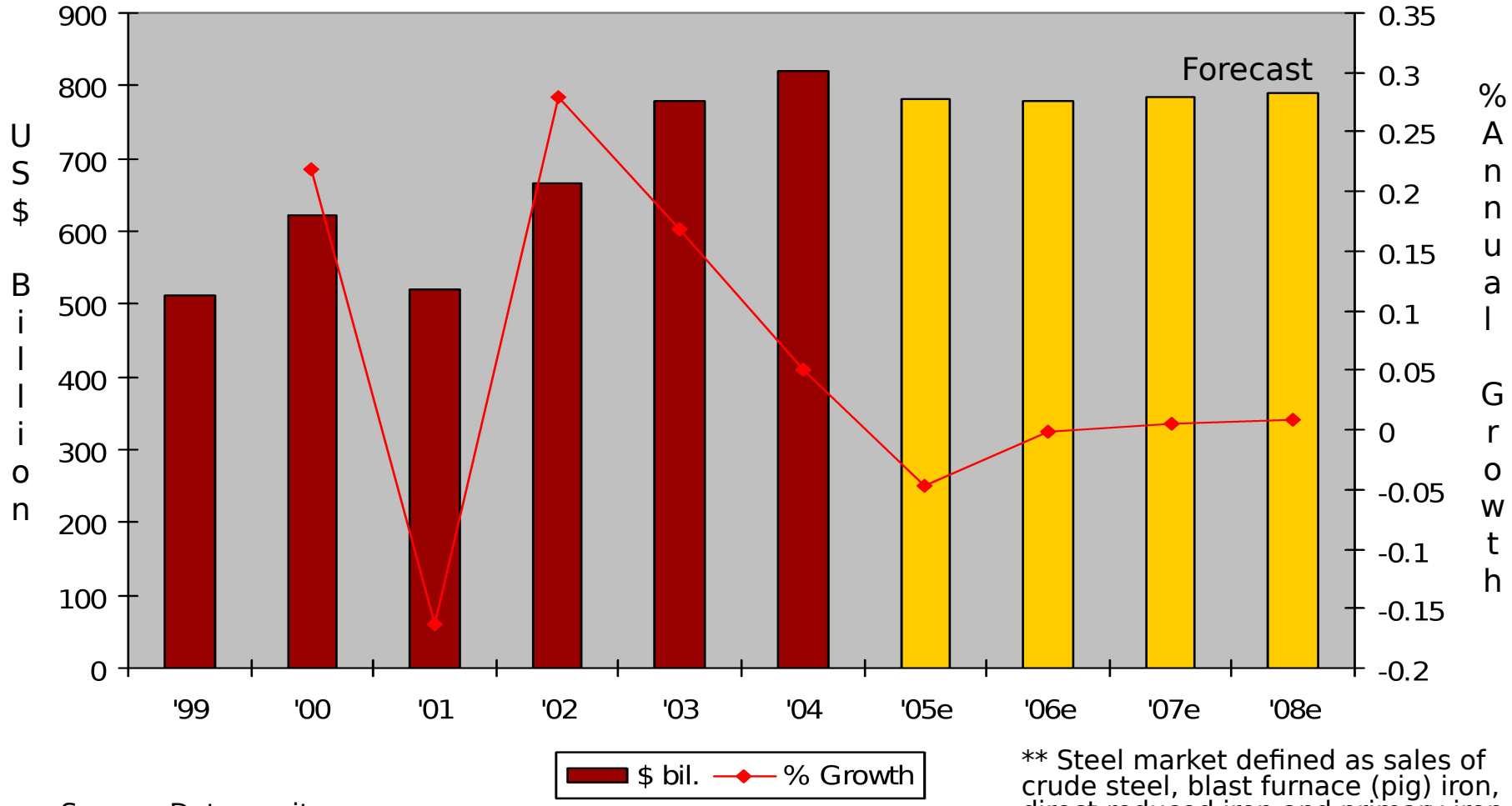
CRU Global Steel Price Index (SPI)*
(April 1994 (A94) = 100)



Sources: CRU International, GFMS-MC

* Global weighted index of steel products (flats and long products) from North America, Europe and Asia.

Global Steel Market Value Forecast 2005-2008



Source: Datamonitor

** Steel market defined as sales of crude steel, blast furnace (pig) iron, direct reduced iron and primary iron.

Global Aluminum Market

- Global market = $52B (32% increase in 2004)
- Asian market = 32% of the global market
- China has emerged as the biggest producer
- Top 3 suppliers account for 29% of global share
  - Alcan, Alcoa, and Norsk Hydro
- Reasons for world wide low inventory in 2004
  - Increased Chinese demand
  - Forecast shortages led to inventory build-ups
- Auto & construction account for more than 48% of total U.S. consumption

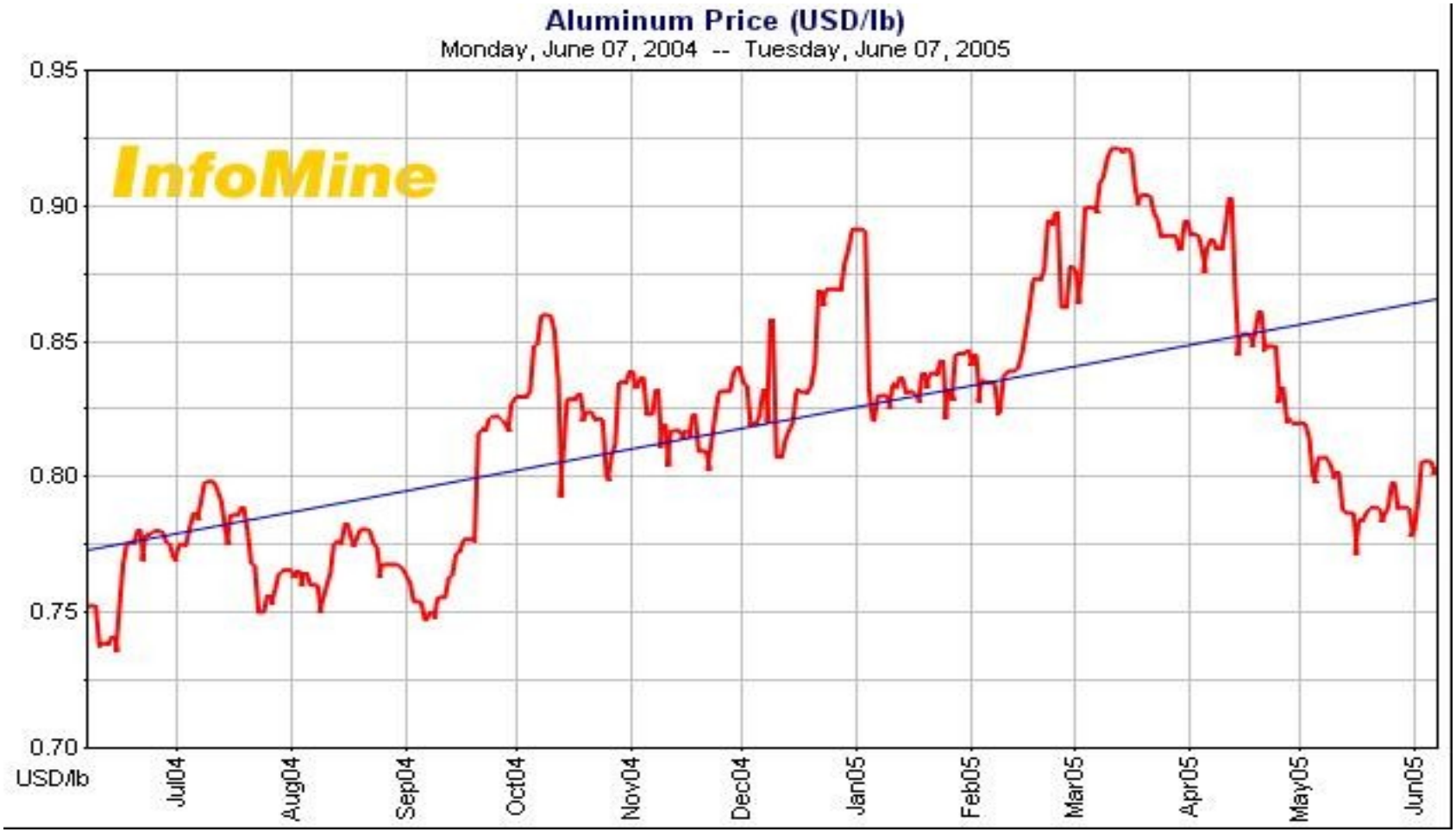
Market Outlook

- Recent Increased Global Capacity
  - Alcoa, Alcan, & others
- London Metals Exchange Aluminum pricing will decline
  - $0.85/lbs in 2005 vs. $ 0.76/lbs in 2006
  - Reduced 2nd half demand in 2005 will weaken Aluminum prices
  - Expect to see lower global demand growth in 2005

Market Outlook Cont…

- North American aluminum shipments expected to rise by only 5%
  - Partly due to lower automotive sector demand
- Expected Trends/Projections:
  - Aerospace industry to boost demand by an avg. of 11% annually
  - Increased capacity in 2006 to result in market surplus
  - New demand driven by non traditional markets

Aluminum Price Index



Input Costs/Currency

- Transportation – costs and lead times increasing
- Scrap:
  - #1 factory bundles dropped - $215 (May) v. $278 (Apr)
  - Chinese mills are well stocked
  - U.S. exports to India & Turkey have dropped off
- Energy (gas, oil, petroleum, electricity) volatile price
- Iron ore & pig iron (Australia & Brazil) scarcity
- Coke and Coal prices increasing
- Nickel price increases
- Weak US $ reduces US purchasing power, makes imports expensive and exports attractive
- China has stalled all purchases of Aluminum
  - Anticipation of a currency appreciation

Sample Metrics

- **NSN's under Landing Gear Commodity: 2,116**
  - **Sole Source NSN's: 1,034**
  - **Competitive NSN's: 1,082**
- **Sample data analyzed:**
  - **Competitive NSN's with known forgings: 207**
  - **Average Production Lead Time (PLT): 535 day**
  - **Maximum PLT: 1,415**
  - **Minimum PLT: 60**

Supplier Actions

- Challenge all surcharges - invoice surcharges separately from usual prices
- Not signing contracts/LTAs w/ suppliers at today's high prices
- Encouraging suppliers to absorb price increases
- Negotiate material prices on behalf of key suppliers
- Purchasing raw stock up front to cut PLT
- Extend existing contract pricing if possible

Supplier Actions Cont…

- Increase frequency of re-negotiation points and reduce contract length in readiness for when market turns
- ID additional sources of supply
- Utilize low cost raw material resources when possible
- Re-engineer – use alternate materials
- Request price relief

Back up Slides

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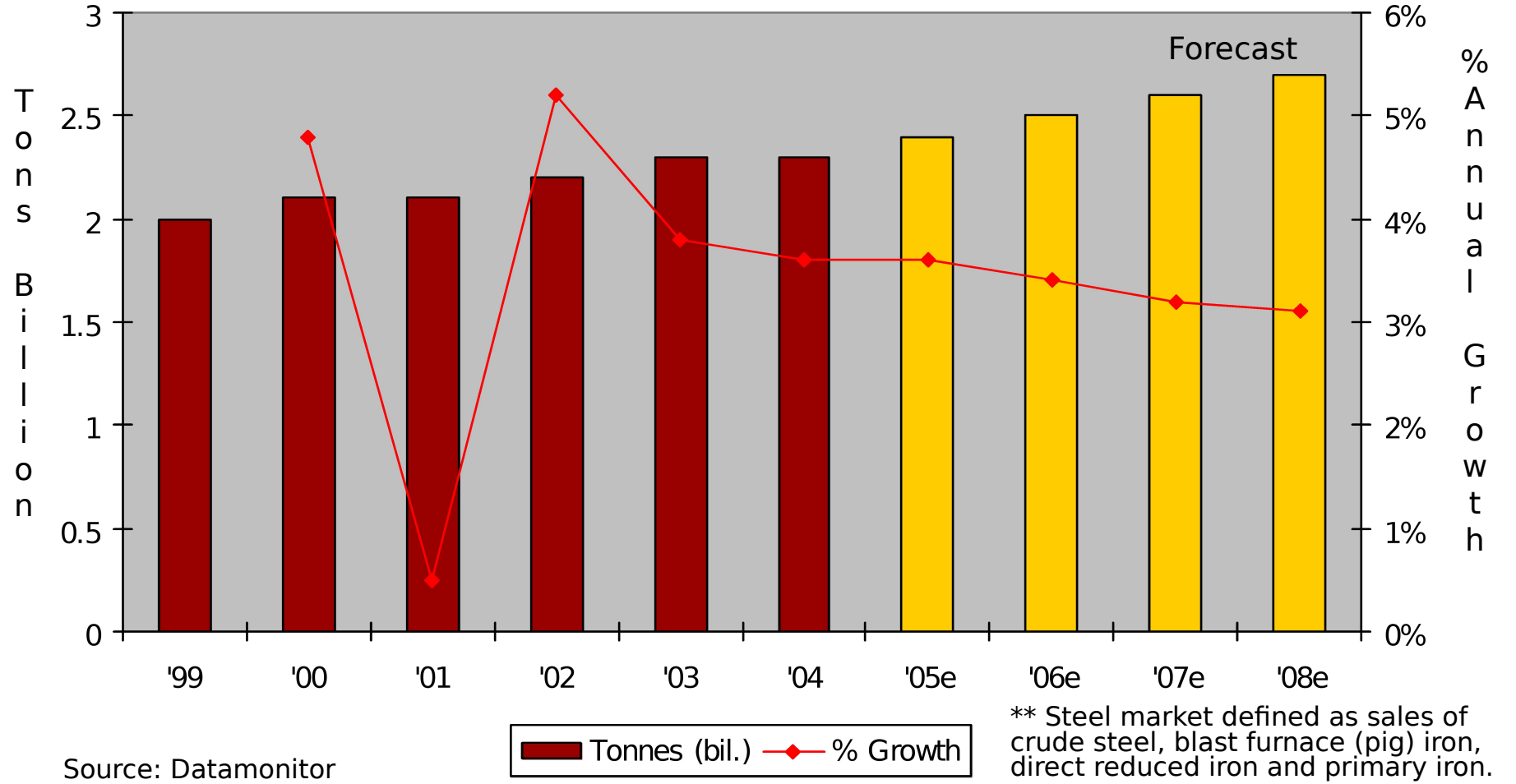
Global Steel Market Volume Forecast 2005-2008



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